

Remarks

This amendment responds to the official action mailed November 1, 2005. A petition to revive under 37 C.F.R. §1.137(b) is submitted concurrently with the required official fee.

The official action contains several objections to the drawings. In Fig. 2, the decision blocks are considered to lack adequate information. Applicant infers that the issue is whether the decision blocks require specific labels of “yes” and “no” for the alternative paths. A drawing correction is submitted herewith including replacement sheets, and annotated show-changes copies are submitted as part of this amendment to show the changes made. Among other corrections, “yes” and “no” labels have been added. The contents of these labels is apparent from the decision flow as provided in the written description. No new matter is presented.

Objection under 37 C.F.R. §1.83(a) was made to the extent of illustration of the subject matter Claims 2 and 21. These claims recite the aspect of the invention that the formatted display (namely the visual output) can be caused to display any one or more of various contents. According to the disclosure, the contents include plural particular types of display (picture, Cartesian time/amplitude plot, vectorscope, tabular information, zoom on area of interest, cursor, etc.) and in different modes one selected type of display can be made to occupy the entire formatted display or the types can be selected and displayed simultaneously in discrete areas or displayed over one another. It appears that the examiner's position is that in order adequately to illustrate the subject matter of the invention, every possible combination of types that might be displayed individually or with one, two or more other types, must be illustrated or the drawings are objectionable under Rule 1.83(a). Reconsideration is requested. Such a requirement is unwarranted.

Applicant has amended Fig. 2 to better illustrate the aspect that the display is composed by a selection of display types. This information is shown by text labeling. There is no basis to assert that the person of ordinary skill requires separate visual illustrations of all possibly display compositions as an illustration that the display is

composed of selections among alternatives. Therefore, this objection is believed to be overcome. If the objection is continued, applicant requests that the examiner cite legal authorities or specific rules that actually require illustration of all possible appearances of a selectably changeable display in a similar context.

Re claim 9, the drawings were considered to lack illustration of a resizing engine. According to the disclosure, a resizing “engine” is an attribute of the video processor and display generator that produce the composed display as shown in Fig. 2. For example, in order to display in a corner of the formatted display 40 the full video picture 22 that occupies the full display area of the picture contained in the video input signal, the pixel data of the video input signal is processed to resize the picture to fit the allotted area of the formatted display. This aspect was illustrated in Fig. 2 by showing the input picture and the formatted display. Applicant has overcome any objection by adding the term “resize” to the labeling in the drawing associated with the display. Insofar as the examiner may be objecting to the lack of an illustration of a discrete block labeled “engine,” applicant notes that the term “engine” is routinely applied to a software function such as an “engine” that is contained in the video processor and display generation software. Accordingly, the added label overcomes the objection.

The drawings were subject to objection for lack of a picture zoom in Fig. 2 as mentioned in paragraph 69. Reconsideration is requested. Fig. 2 clearly shows a zoomed area in the upper left quadrant of the formatted display, including the reference number 44. This zoomed area shows the area of particular scrutiny around the cursor. That area is also shown in the right quadrant, where it is not zoomed, making it abundantly clear that the area in the upper left quadrant is enlarged (zoomed). The objection to the drawing is erroneous and should be withdrawn.

The dash-dot arrow mentioned at paragraph 70 was not found in the drawing at Fig. 2 as stated. The dash-dot arrows actually are shown in Fig. 3, and associate the corresponding displays of different types of information content from the picture (upper right), the zoom (upper left), the tabular data area (lower left), etc. Paragraph 70 is

amended to refer to Fig. 3, which is an obvious typographical correction without introduction of new matter.

Annotated sheets showing these drawing corrections are submitted as part of this amendment. Replacement sheets with the changes entered are also submitted.

Regarding the written description, applicant has submitted a shorter Abstract as required in an objection. The Abstract as filed did not contain any of the words or phrases to which objection was made in the official action, including legal phraseology ("said" or "means") or a repetition of the title, or phrases that are implied (such as "the disclosure describes ..."). The objection has been overcome by shortening the Abstract.

Applicant has adopted a version of the title that the examiner has suggested as a preferable title.

Objection was made to the specification because eleven paragraphs selected by the examiner were considered to include paraphrasing of the claims. The examiner objects that these paragraphs do not describe how the claims work, or perhaps are best described as summary-of-the-invention paragraphs. Reconsideration of the objection is requested. It is inappropriate for the examiner to object to a selected part of the disclosure as lacking some aspect required of the entire disclosure. The legal requirement is that the disclosure as a whole contain an enabling disclosure. The official objection to selected paragraphs as being paraphrases of claim contents and other paragraphs as being summaries of claim contents is arbitrary and capricious. Applicant requests that these objections be reconsidered and withdrawn. The grounds of objection are irrelevant to the issue of whether the disclosure as a whole is adequate to enable a person of ordinary skill in the art to practice the subject matter claimed.

The disclosure was objected to as being informal because the identical same phrase was not used at every occurrence of various particular reference numbers. Applicant has reviewed the disclosure and made a number of changes in deference to the examiner's preferences. However, requirements for changes of this type are inappropriate. The applicant is entitled to be his own lexicographer and there is no

sound basis for the examiner or the Patent Office to dictate specific terms and phrases that shall define and describe applicant's invention.

The examiner's preference in written English may lean to rote repetition of the same identical terms at every occurrence of a given idea or aspect. However, other persons prefer variety in prose and find such repetition to be boring and lacking in expressive detail. There are instances in which use of the same identical expression is less appropriate than a variation that lends emphasis by virtue of word order.

There is no lack of clarity in the disclosure caused by referring at times to an "input signal" as a "signal input" or a "video input signal," etc., particularly when the particular passage has not stated or suggested that multiple signals are being processed in parallel and each of these phrases is associated with the one and only reference number that refers to the input signal. The disclosure plainly refers to that input signal and the use of modifiers or alternative word ordering does not render the description unclear. It is not appropriate for the examiner to require that applicant blunt the information presented in applicant's disclosure, by reducing the number of informative phrases that shall be permitted subject to objection for alleged lack of clarity if the disclosure departs from the examiner's limited list of permitted phrases.

Objection was made to the disclosure "because it inadequately describes the possible display presentation mentioned in claim 21." Claim 21 has been canceled, however this claim simply recited that the formatted output was composed from selectable combinations chosen from among the alternatives that can be depicted. According to the disclosure, the user can select among the different content types available to be displayed at any given time, selecting one two or more that are sized as needed to share the available space in the formatted display. Alternatively or additionally to user selection, the display processor can select at least part of the contents, for example when shifting to a display of an area of scrutiny associated with one or more pixels that meet a selection criteria. One example is applying a cursor to the full video picture area (perhaps because a color gamut error occurred in that area as the video frames changed), displaying a zoom of that area (as an area of particular

scrutiny), and also a tabular display of the associated color sample YCbCr data. This concept of composing and displaying content types by manual and automatically applied selection criteria is found throughout the disclosure.

Claims 1, 18, 19, 21 and 22 were subject to objection for terms or phrases that were considered unclear. Applicant has addressed the phrases to which the examiner refers. Claims 21 and 22 are canceled. Claims 1, 18 and 19 are definite. No new matter is presented.

Claims 21-25 were rejected under 35 U.S.C. §112, first paragraph, and have been canceled. However applicant comments at this point on some of the misapprehensions that the examiner has apparently seized upon as alleged grounds for rejection of these and other claims. In noting that claims 21-25 recite that the user can choose to display in the formatted display a subset comprising one or two or more of the list of display content types, the options include displays that might have a zoom of the area of interest but not the full picture with the cursor. According to the examiner such a capability is useless. Reconsideration is requested. Even assuming arguendo that there are potential combinations of combined display selections that are more useful than other potential combinations, one cannot conclude that the apparatus as a whole is useless. Such grounds of rejection are wholly unwarranted.

In the comments re claims 23-25, the examiner asserts that the specification lacks a disclosure of switchably displaying manually and automatically selected cursor positions. This aspect is found in the discussion of user selections and switching functions, for example at paragraphs 32, 50, 57, 60 and is shown in the drawings such as Fig. 2.

Regarding claims 2-6, the examiner asserts that the claimed invention does not comply with the enablement requirement because the claims encompass selecting "at least two" selectable data images concerning the area of particular scrutiny. The examiner posits that some of the potential choices are not useful, mentioned in particular are modes wherein the cursor does not spatially identify the area of particular interest as a bracketed zone in the full picture, or where the zoom is magnified to a

display of a single pixel, or where there is some combination of selections that are not capable of some mode of analysis. Reconsideration is requested. The enablement requirement is not violated if it is possible for the user to select displays that do not serve at the same time all the possible uses that the examiner can pose. There are salutary aspects in the ability to take broad and narrow views of the video input signal, to select for display alternative presentations of information about a particular part of the display, and manually or automatically to do so, with great versatility. The fact that the user might not want to use all the possible combinations does not render the product useless.

The examiner's suppositions about how the product actually should be used are contrived and illogical. The user can do many things with the invention as disclosed and claimed. Users sometimes choose to display video content (the picture). At times an overview of video production information is desirable. If a color value or color gamut criteria is used as a selection, the user may want to focus on a zone of the picture. However if the picture is a color bar test pattern, the user doesn't need to look at the picture to analyze it.

Even if the user has nothing other than a tabular data display, the display includes horizontal line number and sample count information (see Figs. 1, 3 and 4) that locate the sample. Furthermore, even without any knowledge of location in the picture, the data values alone are useful in monitoring the operation of video production equipment in an ongoing on-the-fly manner. Even assuming that the examiner is correct to say that it is possible by combing through the possibilities to propose combinations of "at least one" or "at least two" of the list of displays that are not useful for direct comparison with one another, the ability to change temporally from one display to the next provides a useful capability to analyze by comparing successive displays, instead of simultaneous display of information containing alternative data respecting the video input signal.

In summary, the examiner's suggestion that the claimed invention is not useful for analyzing video information is mistaken. Furthermore, the examiner's rejection is

made on grounds of lack of an enabling disclosure. There is no basis to say that the disclosure does not teach how to generate the displays that can be selected (reduced or enlarged pictures, plots of sampled and digitized values, tabular data, etc. mapped and presented on a VGA or other display). The disclosure is enabling. The examiner's suggestion that the invention is useless is unwarranted and erroneous.

Certain of the claims recite that the full video signal is selectively presented (mentioned in the rejection of claims 2-6 and 1-17 under 35 U.S.C. §112, first paragraph). In these rejections, the examiner objects on grounds that posit a particular selection one display type for the entire formatted display or of two or more display types whereof one is not the full picture. However the term "selectively" denotes the concept of selection. Even if the examiner is correct to say that in some modes the user cannot see the location of the cursor in the full picture, the apparatus nevertheless provides useful output information because the user by manual selection or the apparatus by applying selection criteria, is arranged to select among alternatives from time to time. Thus, the examiner's suggestion that the device is not useful are without basis.

A number of the terms and phrases mentioned in the objection to the specification are repeated in the rejection of claims 1-17 and 20-25 under 35 U.S.C. §112, second paragraph. Additional terms are cited for lack of clear antecedent basis. Each of the terms to which the examiner refers has been corrected or cancelled. The claims as amended are definite. No new matter is presented.

Claims 1-11, 18 and 20-22 were rejected as obvious over a combination of Krishnamurthy (US 5,469,188) in view of Lau (US 6,525,746). The claims have been amended to more particularly and distinctly define the invention and to better distinguish over the prior art of record. Both of the prior art references concern video editing workstations that operate on stored video frames, one by one. There are aspects of the prior art workstations concerning the selection of a pixel position and the generation and display of data about the selected pixel. However neither of the references nor their combination discloses or remotely suggests an article of test equipment for active video

as claimed by applicant, i.e., an apparatus for analyzing the successive frames and fields of a video input signal, wherein a video processor is operable to selectively compose the formatted display, including to change the area of particular scrutiny, so as to select for video data characteristics meeting predetermined criteria. The references teach manual devices for detailed analysis of pixel-by-pixel distinctions in single picture frames. The references fail to teach or suggest a device that responds by altering the composition of the display or even the location of the area or particular interest, selectively by virtue of the pixel data meeting selection criteria.

Krishnamurthy is sensitive to the problem of generating color gamut errors when mathematically converting pixel data between color space encoding schemes, e.g., when changing between RGB coding and YCbCr coding. However there is no suggestion in Krishnamurthy that the formatted display output should be arranged to select some part of the picture to be an area of particular scrutiny so as to highlight or focus scrutiny on the area of the error, or to selectively change the nature of the data that is displayed when an error is detected. Instead Krishnamurthy enables a cartoon animator to work on static individual video frames one at a time, manually selecting pixels to be represented numerically or manually selecting among predetermined plots or displays. The device does not and cannot respond to errors arising in active video containing successive frames and fields. Krishnamurthy does not suggest such an embodiment and there is nothing in Krishnamurthy to suggest that such an embodiment would be possible or desirable for any particular reason.

Lau does not supply the teachings that are missing from Krishnamurthy. According to Lau, as in Krishnamurthy, the user works on a freeze frame to manually identify selected pixels that are to be grouped as defined objects. In Figs. 8-10, for example, the user of Lau works on a static frame to define the depicted person's arm as an object, namely by using a cursor to select pixels that outline the arm. There is nothing in Lau or in Krishnamurthy that would lead a person of ordinary skill to define, for example, attributes applied as criteria to determine an area of scrutiny, and to switch the formatted output display to a different selection of display types when the criteria are met.

Neither Krishnamurthy nor Lau even remotely suggest that it would be possible to proceed as applicant has proceeded to provide for a selectably switched output. In Krishnamurthy, for example, there is no suggestion that anything other than the eye of the artist might be used for impetus to switch the formatted output so as to devote particular scrutiny an area of the picture subject to a “rainbow effect” or other “erroneous” color display. It is up to the artist to move the crosshairs. There is no suggestion that upon occurrence of any particular sort of error (or detectable non-error criteria) might be used as a trigger to switch to a different set of content types in the formatted display. It is wholly up to the user to decide among fixed alternative modes of information display.

Lau is much the same as far as selection is concerned. There is nothing about the Lau device that enables a criteria to be applied for determining, for example, the perimeters of the object to be outlined in Lau. It is up to the artist (user) to decide on the object that is desired (such as the model's arm) and manually to select the pixel positions in each successive frame that are located on the perimeter of the desired object.

The examiner's comments (page 18, lines 3-6 of the official action) allow that Krishnamurthy does not disclose selection of the display window 32, status window 37 and/or a separate zoom window. However, it appears that the examiner regards the full picture and subordinate windows in Lau to supply this aspect. Lau's subordinate windows allow a zoomed or magnified area to be displayed on which the user can manually select pixels as shown in Fig. 9. Having outlined an object such as the person's arm, the object can be processed as a unit, such as by application of a translucent color filter 116. Nevertheless, these steps are manual. The prior art does not disclose or suggest the application of criteria to trigger a different display composition or the use of criteria to selectively identify an area of particular scrutiny. Even assuming arguendo that the model's arm in Lau is an area of particular scrutiny, which is a hindsight view of the claimed term and concept, there is no disclosure or suggestion in Lau that detection of an arm in the display should trigger a change in the contents appearing in the formatted display composition. There is no suggestion that it

would even be possible to cause Lau's device to find an arm other than by manual artistic attention. Lau alone or in combination with Krishnamurthy does not meet applicant's invention claimed as a whole.

The prior art discloses different apparatus and different techniques from those disclosed and claimed by applicant. It is possible with applicant's disclosure and claims in hand to select prior art for comparison. However proceeding from the prior art without hindsight knowledge, there is no routine way to proceed to combine or modify the prior art to meet the invention. In the prior art, there are certain zoom and data facilities made available to the artist, but the artist makes the pertinent choices. These devices are artistic assistants, whereas applicant's claimed invention is an apparatus for on-the-fly analysis of video input signals. The user of applicant's apparatus can set attributes and areas as criteria, but when the frames of video begin to pass, the criteria cause the display to selectively change as thus provided. This aspect is set forth in independent claims 1, 18 and 20.

The claims as amended particularly and distinctly define the subject matter of the invention. The formal matters to which the examiner refers have been corrected. The grounds of rejection have been obviated. The differences between the invention and the prior art are such that the subject matter claimed as a whole is not shown to have been known or obvious. Reconsideration and allowance of the claims are requested.

Respectfully submitted,

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/Stephan Gribok/
Stephan P. Gribok
Reg. No. 29,643
Duane Morris LLP
One Liberty Place, 1650 Market Street
Philadelphia, PA 19103-7396
tel. 215-979-1283
fax. 215-979-1020
SPGRIBOK@DUANEMORRIS.COM

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